INPUT

Report

IDENTIFYING PAYROLL PROCESSING NEEDS OF LARGE ORGANIZATIONS

Submitted to:

CERIDIAN CORPORATION

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Submitted by:

INPUT

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I. BACKGROUND

INPUT was commissioned by Ceridian to conduct a study on the payroll and associated human resource processing needs in large organization (i.e., those with 2,000 or more employees).

INPUT planned to interview 30 organizations and in fact interviewed 37 organizations from April 14 to 16, 1993; the respondents were divided between the commercial (20 respondents) and state/local sectors (17 respondents), as shown in Exhibit 1 and 2. The respondents were those knowledgeable in the payroll area, especially concerning systems needs and plans. The titles of those interviewed are shown in Exhibits 3 and 4.

Ceridian reviewed the planned questionnaire and suggested a number of changes.

Respondents were generally quite forthcoming, although in a few technical areas did not have definite opinions; in cases concerning the use of specific future vendors respondents were often unable to unwilling to comment.

In addition, INPUT has reviewed the strategies of six leading suppliers to this market, focussing on how they are responding to changes from host/mainframe technology to client/server needs.

The user research analysis below is largely based on the interview research. Much of the analysis is supported by tabular exhibits which show the number of respondents responding to a particular question from the questionnaire. These numbers should be taken as suggestive and not definitive. the sample sizes involved are not large enough to permit drawing firm conclusions.

INPUT has also included its comments and conclusions based upon its experience in this area as well as on recent research in analogous functional areas.

II. USER RESEARCH FINDINGS

Plans For Changing Systems

In both sectors about two-thirds of those interviewed are planning significant changes or replacements to their payroll/human resource systems. For the most part these are full replacements.

Exhibit 6 is a count of the specific applications that are expected to be changed or replaced. Payroll and timekeeping represent the applications most likely to be changed (in about half of the organizations in both sectors). Government organizations appear to have slightly higher levels of need for certain applications, which may be explained by their different circumstances:

- Tax Filing: As will be seen below, most government payroll systems have been custom-developed up to now. Custom programs are often more difficult to interface with externally-supplied tax filing software.

- Job/Salary History: Civil service system requirements often place much more importance on a complete job/salary history than in commercial organizations.

- Position/Budget Control: Most government budgets are driven by budgeted line items for each position. Increases (or, these days, decreases) in personnel budgets are driven directly by these "lines"; knowing whether a line is actually occupied is critical.

An obvious challenge to software and service providers is that the other functional applications shown in Exhibit 6 show a fairly constant, but a relatively low, level of need. This means that a vendor must be prepared to offer a variety of applications in order to be considered.

The need to offer a variety of applications is intensified in an integrated environment. As shown in Exhibit 7, a majority of commercial respondents already see themselves operating in an environment with a generally high level of integration; the trends seem heavily weighted in favor of increased integration.

The same general trend toward integration is evident in the government sector, but seems to be somewhat weaker, as shown in Exhibit 8, with fewer organizations believing they are now at an acceptable level of integration.

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Characteristics Of Future Applications

In the commercial sector packaged software appears to dominate, although most of the future use of packages is from companies that are already package users (Exhibit 9). Switching between packages and custom development appear to be about equal.

- As a general statement, it would appear that packages are perceived as meeting company needs at least adequately.
- The time, expense and complexity of custom development does not appear to warrant, in most companies' minds, the potential benefits of receiving an optimized set of functions.

Until now, government payroll/personnel applications have been largely custom developed (Exhibit 10). However, government is also starting to move in the direction of utilizing software packages.

As noted earlier, in many cases respondents were not able to supply the name of the software vendor to be used because the vendor had not yet been selected. In other cases, especially in the government sector, respondents were unwilling for reasons of confidentiality to discuss vendor choices. The vendors named were those that would be expected, including D & B, InSci, PeopleSoft and Tesseract.

Client/server technology is used modestly now, mainly limited to data collection and data analysis (arguably, not true client/server applications). Commercial organizations are looking at greater use of client/server technology in the future, even though respondents found it difficult to define exactly what these client/server applications would do (Exhibit 11). INPUT has found similar reactions to this sort of question in other functional areas surveyed.

The government sector appears to be far behind the commercial sector in the expected use of client/server technology (Exhibit 12). INPUT believes that the following factors contribute to this:

- Government often works in an older technological environment that is difficult to change.
- There is often a lack of both funds and knowledge for making technology changes.
- Users cannot now identify concrete benefits.
- Governments are often complex organizational entities which can be difficult to combine with a decentralized technological environment.

A related issue of decentralization is how important it is to have payroll processing located in geographic proximity to the user (and whether a "user" means where the payroll is administered as opposed to where checks are received and distributed). There is no clear picture here for either commercial or government organizations (Exhibits 13 and 14).

- In both cases it appears that geographic proximity is important for about half the organizations interviewed.
- It appears to be more important where the "user" is defined as residing in locations where checks are received and distributed.

INPUT believes that this may be as "all things being equal" kind of issue, where other factors are probably more important, such as guaranteeing to deliver checks to a series of check distribution points within X hours of receipt of inputs.

Vendor Selection Process

The process for selecting a new application and vendor is fairly straightforward in commercial organizations:

- A team of users or users and IS identify the need for change and general applications requirements.
- This team, with the addition of IS or, more rarely with IS acting alone then selects the hardware, software and/or processing environment.
- The same group then prepares a short list of vendors and recommends the vendor to be used. Depending on the dollar amount involved, this might have to be signed off at higher levels of the company; however, senior executives will rarely become involved with the substance of the decision making.

This process is summarized in Exhibit 15.

The process is different, and more complicated in government. In some cases a process similar to the commercial sector may be followed. However, government agencies often do not have the luxury of analyzing their own payroll/human resources systems requirements.

- Many changes come about because of legislative or administrative mandates; some of these may come from other levels of government (e.g., from a state for a county or from the federal level for a state). An accumulation of such mandated changes may produce very clumsy systems.
- The private sector has many effective lobbyists who can delay or eliminate many of the most onerous provisions. This is rarely true within government.

Another significant difference is that most governmental procurements must go through an RFP process. This makes the vendor selection process much more mechanical than in the private sector. Successful vendors compete in having RFPs tilted toward their capabilities.

The details of the process can vary widely from one jurisdiction to another and are usually embedded in law and regulations. The process can be quite complex -- one respondent described their process as "Too complicated to explain." Another respondent said that selection task forces end up with 20 people on them to satisfy all the political interests involved. Another just said, It's a three ring circus to select vendors."

Exhibit 16 summarizes the government selection process.

Processing Services As An Option

One respondent was currently using a processing service and had no plans to change. At least one other was using a processing service for certain types of benefits processing (there may have been more examples of this latter category, but would have required interviews with benefits professionals).

In virtually all organizations interviewed, it proved difficult to have respondents focus on processing as an option. In most cases it appeared that no recent, conscious consideration had been given to the use of a payroll processing service. To the extent that respondents were able to assess processing options, the reasons for this lack of consideration included:

- Inability of a processing service to handle the needs of a large, complex organization. Right or wrong, many large organizations perceive themselves as unique. The perceived need for tailored packages is in line with this thinking. This perception of uniqueness appeared to be stronger in government agencies which, after all, are just beginning to examine packaged software seriously.
- The assumption that a service would not be cost/effective. Only one respondent indicated that they had actually examined the issue of cost.
- An assumption that data processing functions will not be performed out-of-house. (Based on other studies that INPUT has performed recently, this is less and less a factor in both the commercial and government sectors.)

INPUT believes that there is something of a chicken and egg situation here: Historically, payroll processing firms have not made large firms their main target; vendor offerings are probably optimized for smaller organizations. Consequently, INPUT is not surprised at the reaction of the these respondents.

INPUT believes that there in fact may be an opportunity to provide payroll/human resource services on an "outsourced" basis. In addition to being something that is being discussed and advocated in business journals, recent INPUT research among functional (i.e., non-IS) executives indicates a new willingness to outsource these kinds of operations. The following factors are important in INPUT's opinion:

- Potential buyers should have a good understanding of what is being offered, especially if the offering is unlike the conventional "payroll processing service". The range and flexibility of application coverage (including application functions not covered) should be clearly spelled out. Given the current environment in large organizations this will call for education and missionary work.
- Closely linked to the applications functions covered is the issue of costs and benefits: The real costs and benefits of current payroll/HR processing are probably not known in the majority of organizations. Assuming that a case can be made for the economics of processing services in a large organization, then there is an important story to tell. This is a story that large companies will listen very carefully to, given the current fashion for outsourcing.
- Last, and perhaps most important, is the issue of outsourcing the payroll/human resource <u>business function</u>, as opposed to computer processing. This option should be considered by Ceridian for the following reasons:
    - Transferring the function (i.e, moving personnel from the client to the outsourcer) is attractive to target companies because
        - -- The function itself may be performed better or more efficiently.
        - -- Head count will be reduced.
    - The margins to the vendor are often much greater for outsourcing a business function as opposed to outsourcing a processing function (e.g., the margins in mortgage processing versus mortgage <u>servicing</u>.)

  To INPUT's knowledge, business function outsourcing of payroll/human resources is not being pursued aggressively by any vendor, although Andersen Consulting has begun to offer this general kind of business function outsourcing.

INPUT believes that if this option is to be considered, then additional research will be required, both among payroll/HR managers as well as the executives above them.

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III. VENDOR RESEARCH FINDINGS

ADP

One ADP Boulevard
Roseland, NJ
201 994-5000

Strategy for Dealing with Changes in the Market

ADP anticipated that changes in the market from mainframes to client/server technology would result in a change from high cost mainframe and mini human resource software products to lower cost products that would make it less costly to move in-house. They decided to quickly make client/server options ready for present payroll clients that can aid them to move some work in-house, but provide reasons for continuing to use ADP services.

Current Status

ADP has concluded licensing arrangements with PeopleSoft to sell (sub-license to its clients) use of the PeopleSoft PS/HR product and PeopleTools to aid modifications. The PS/HR product being sold by ADP utilizes Gupta SQL and OS/2. In order to get started rapidly, the previous release of the system, which is fully documented and more stable is being sold. (The licensing amount was lower, also.)

The sales approach offers alternatives including using client/server capabilities for human resource applications such as benefits administration while continuing to use ADP for payroll runs since ADP has a reputation for staying up to date on withholding and government regulations and also has direct deposit capabilities. Clients of ADP could also convert to a full client/server human resource system including payroll over a period of time, but development work would be needed and run time could be lengthy for some jobs.

How Might Offerings Change

ADP will develop a more comprehensive plan for clients to use in moving or implementing human resource applications on client/server technology. This will include steps or phases that keep some work at ADP such as the payroll run or payroll printing and direct deposit of payroll. Ultimately, a client might just use on-line services from ADP for up to date information on withholding or to make direct deposits at multiple banks.

Vision of the Market

ADP feels that a number of mid sized to small companies are interested enough in client/server solutions to try and implement payroll and other HR applications on that technology, but that they will also will have second thoughts about initiating such a venture. ADP feels that the option of moving to client/server solutions with the aid of ADP will stop some clients from moving as well as providing ADP with the opportunity to gain revenue when they do want to move. They may be underestimating the desire of many small companies to find economic client/server solutions that can reduce costs, however.

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PeopleSoft, Inc.

1331 North California Blvd.
Walnut Creek, CA 94596
415 946-9460

Strategy for Dealing with Changes in the Market

Anticipating a change in the human resource market from the dominance of mainframe software products, the founders of PeopleSoft decided to be the leading firm in the supply of complete human resource application systems including payroll for client/server environments, particularly for larger companies. The founders also decided to follow up and support their offerings of client/server human resources software in larger companies with accounting software products in the future. In areas of the market that they were less likely to penetrate (smaller companies), they decided to look for other opportunities to market their software products.

Current Status

Based on the experience of its founders in human resources applications at Integral Systems, client/server applications were developed that incorporated the use of SQL, Windows and development tools. These HR applications been very successful with Fortune 500 companies and have been used with DB2 and Oracle databases. Client/server accounting products have also been successfully launched. The HR products are thought of as high value products that are high in cost, however.

A contract was concluded that allows ADP to sell sub-licenses of the HR client/server products to smaller companies. PeopleSoft hopes some of the mid sized companies that are ADP customers may turn to PeopleSoft in the future, but these companies might turn to a less costly product.

How Might Offerings Change

New human resources capabilities are planned that would provide more complex reporting and speed up certain processing and printing runs. These products would be of greatest interest and expand the use of PeopleSoft human resources and payroll software at larger companies. There is also some concern about addressing the HR and payroll processing needs of smaller companies.

PeopleSoft has found it necessary to provide an increasing amount of professional services support to companies using its products, which may lead to steps to improve its set of tools, PeopleTools. There are also plans to market these tools as a separate product.

Vision of the Market

Based on previous experience, PeopleSoft founders feel that the most significant opportunity in the marketplace is addressing the needs of larger companies who want to downsize from the use of mainframe human resource and payroll software products that are costly as well as expensive and time consuming to modify. They also feel that this opportunity can lead to other profitable steps such as marketing client/server accounting products and tools for adding to or modifying their client/server software products. PeopleSoft has proved that their target opportunity exists, but they appear to be neglecting the interests of smaller companies.

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Dun & Bradstreet Software

3445 Peachtree Rd.
NE Atlanta
GA 30326
404 239-2000

Strategy for Dealing with Changes in the Market

Having suffered losses in sales as a result of moves to client/server technology, D&B has announced plans to develop a full set of products that will under SAA as well as UNIX client/server environments. They have already moved human resources and accounting products into client/server options and are testing and introducing them quietly with the hope of not killing off mainframe sales.

Current Status

Client/server versions of human resources products are in test at GAB in Parsippany, N.J. as well as elsewhere. D&B mainframe sales have sunk dramatically so that there is not as much reason to worry about affecting business, but contacts at GAB refer to their D&B accounting and personnel software as LAN software reflecting the focus of D&B. D&B wants to emphasize the continuing importance of mainframe software products as well as the availability of client/server solutions. This has led to a weak posture and divided responsibilities at D&B as well as delays and questions about client/server products.

How are Offerings Likely to Change

Contacts at GAB and elsewhere claim D&B really has competitive products ready for client/server situations, but they speak of announcing or advertising their capabilities in the future. Competition expects some D&B sites to continue to use mainframe products, but force D&B to eventually come up with adequate client/server products.

Vision of the Market

Some executives and planners at D&B still feel that there are many problems in the use of client/server products that have kept the window of time open for it to successfully bring out products. The market demand for these products and resulting savings is large enough now to persuade many companies to select alternatives other than D&B.

Paychex

911 Panorama Trail South
Rochester, NY
716 385-6666

Strategy for Dealing with Changes in the Market

Recognizing that many clients may now be considering a move to a client/server solution, Paychex is now telling clients that they are planning to introduce a client/server like capability in one or two years in order to hold on to business that might go elsewhere.

Current Status

Can accept limited transmission from clients to initiate work at three East coast sites. Can handle some personnel jobs on a batch basis.

How are Offerings Likely to Change

Paychex will change present system to support sale of distributed capabilities to clients. Paychex will also develop or acquire software products to market to clients. Current planning is to accomplish this in one to two years. INPUT believes that it will be at least two years.

Vision of the Market

Paychex feels that even smaller companies are reading and thinking about client/server options for payroll.

Cyborg Systems

2 North Riverside Plaza
Chicago Illinois, 60606
312 454-1885

Strategy for Dealing with Changes in the Market

Despite its experience and presence in the mainframe market, Cyborg has taken account of the movement to client/server solutions and is currently selling client/server human resources products that compete with those of PeopleSoft and other vendors. Competing on the basis of price and starting with a lower size firm than those PeopleSoft starts with (250 people or larger for Cyborg versus. 300 or larger for PeopleSoft).

Current Status

Cyborg is still selling three human resources, payroll/tax reporting and time/attendance reporting systems that run on IBM mainframes and the minis sold by a number of vendors. Cyborg has installed the capability to download some of the functions of this system to PC's at a number of clients as well as a standalone client/server based system that has a set of human resource capabilities including payroll. This system is the major competitor faced by PeopleSoft in many situations.

How are Offerings Likely to Change

Cyborg has plans to increase the capabilities available with the client/server system, particularly the payroll/tax reporting functions. Planning is focusing upon achieving further advantages in price versus. PeopleSoft as well as upgrading mainframe/mini solutions. In marketing client/server solutions, Cyborg will also emphasize experience in managing and updating specifications for tax withholding and reporting.

Vision of the Market

Cyborg feels that the human resource market needs client/server products as well as the capabilities offered by its current set of mainframe and mini human resource products. Cyborg also feels that some companies need the ability to keep mainframe software products handling certain functions while moving others to workstations. The market may be moving more quickly to client/server products than Cyborg anticipates. Even if Cyborg is right, however, the cost of supporting and further developing products on client/server as well as mainframe and mini platforms could be prohibitive.

Spectrum Human Resources Corp.

1625 Broadway
Denver, CO 80202
303 534-8813

Strategy for Dealing with Changes in the Market

Spectrum provides a complete set of software products for workstation/PCs that covers all aspects of human resources including personnel administration, training, benefits and payroll, for companies below 300 people in size.

Current Status

Over 300 installed. Smaller clients of payroll processors have replaced processing with this system.

How are Offerings Likely to Change

Spectrum is upgrading its present offering and considering the development of capabilities that might meet the needs of larger companies.

Vision of the Market

Spectrum feels that the market has moved closer to its set of capabilities and is trying to take advantage of the situation. Spectrum may be focusing its considerations on experience with smaller companies and may be less aware of the type of software products that larger companies are apt to be interested in.

IV. SUMMARY AND RECOMMENDATIONS

Findings

The payroll/human resources applications area is now in a state of flux and therefore represents a market of potential opportunity to Ceridian:

- Time is running out for most installed mainframe-based systems (whether custom or packaged software). This is supported by the relatively high replacement rates contemplated by the survey respondents.
- Client/server technology is seen by competing vendors as the platform of the future. The survey results show that the same sort of assumption is in the minds of many customers.
- Integrated or, actually , a menu of, applications functions are needed to meet the needs of most customers. This has already resulted in vendor alliances being formed to meet the needs of differently sized companies which have different functional priorities.
- "Outsourcing" is generally a positive concept in the non-IS parts of businesses.

However, there are other factors which may be barriers to Ceridian (and other vendors):

- At the working level in payroll/HR, which makes recommendations, there is often an assumption that packaged software is the main option.
- "Client/server" or "PCs on LANs" are just words to many of the functional managers who will be playing a key part in the selection process for new applications . This group will need a great deal of education on what changes (and improvements) client/server technology will bring to their business function.
- INPUT believes there may be ongoing tension between the need to "client/server" offerings, which break up an application and the need for integrated applications.
- "Payroll processing" or even "payroll/human resources processing" may be to restrictive a concept to take advantage of the support that more general outsourcing may have.

Recommendations

INPUT believes that in the medium term (two to four years) client/server applications will become the norm. Successful client/server applications will have found the right answers to the following questions:

- Which operating system platform be selected? Windows NT, NT, OS/2, UNIX (which variant?), Pink, etc.? Which underlying language (C, C++, Smalltalk?)

- Which DBMS, GUI?

- How will functions be allocated between clients and servers? (There may be several levels of each.)

As D&B has shown it is all too easy to make fatal mistakes in these areas.

INPUT recommends that Ceridian proceed cautiously, starting with a functional analysis of what payroll/human resources customers need and postponing technical decisions as late as possible.

Part of the recommended functional analysis should identify the extent to which this market is ready to accept business function outsourcing and under what conditions. INPUT believes that many of the business and technical issues to be analyzed will be the same for business function outsourcing as for a more limited processing offering: In both cases the critical issue will be what functions are left at the client's site and what functions are performed at a central location.

Exhibit 1

Commercial Organizations Interviewed

American Electric & Power
Bankers Trust
Blue Cross-Blue Shield
Bon Marche
Briggs & Stratton Corp.
Brill Worldwide Tech.
Ford Motor Co.
Hill Rom Co.
Honeywell Space Systems
Hughes Space
Knotts Berry Farm
Maritz Marketing Research Inc.
Mercury Marine
Morthern Telecom
Norfolk Southern Corp.
Tektronix Inc.
Teledyne Brown Engineering
Timken Co.
U.S. Steel-Gary Works
Walt Disney Co.

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Exhibit 2

Government Organizations Interviewed

City of Mesa - IS Div.

City of Toledo

Connecticut State Comptroller's Off.

County of Hennysin Medical Center

County of Maricopa

County of Montgomery

Florida Banking and Finance Dept.

Illinois Comptroller's Office

Indiana Personnel Dept.

Iowa Personnel Dept.

Kansas Administration Dept.

Maryland Dept. of Central Payroll

Nevada Controller's Office

South Dakota Bureau of Administration

State of Alabama

Texas Human Services Dept.

Vermont Dept. of Finance

Exhibit 3

Titles of Respondents
Commercial Organizations

Executive Assistant to Sr. VP
Payroll Manager
Payroll Manager
Corporate Payroll Manager
Programmer - Analyst I
Manager of Payroll Systems & Controls
Office Automation Analyst
Controller
Director of Payroll
Manager of Compensation
Payroll Supervisor
Payroll Manager
Payroll Manager
Senior HRIS Manager
Payroll Manager
Administrative Operations Analyst
Payroll Supervisor
Payroll Manager
Accounting Manager
Payroll Manager

Exhibit 4

Titles of Respondents Government Organizations

Payroll Supervisor

Commissioner of Accounts

Asst. Dir.-Central Payroll

Payroll Manager

Human Resource Analyst

Financial Program Manager

Chief-Bureau of State Payrolls

Payroll Manager

Senior Systems Analyst

Chief-Compensation & Benefits

Personnel Mgt. Specialist

Director of Central Payroll

Chief Deputy Controller

Mgr. Business Enhancement Group

Payroll Manager

Payroll Officer

Director of Payroll

Exhibit 5

Number of Organizations Making Significant Changes/ Replacements to Payroll/HR Overall

Change/ Replacement?	Type of Organization: Commercial	Type of Organization: Government
Yes	13	11
No	7	6
Total	20	17

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Exhibit 6

Number of Organizations Making Significant Changes/ Replacements to Specific Payroll/HR Functions

Application	Commercial	Government
Payroll	10	9
Timekeeping	8	8
Labor distribution	5	6
General ledger/accounting	5	4
Retirement planning	4	1
Job/salary history	4	7
EEO/Affirmative Action	4	4
Tax filing	3	8
Health/welfare administration	3	3
COBRA	3	3
Employee development	3	2
Position budget/control	2	8
Applicant tracking	2	5
OSHA	2	4

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Exhibit 7

Current and Future Levels of Payroll/HR Integration: Commercial Organizations

(Number of Companies)

Current Integration	Future: High	Medium	Low/DK	Total
High	12	0	0	12
Medium	2	0	0	2
Low	0	4	2	6
Total	14	4	2	20

Note: For information only; not necessarily projectible due to small sample size.

Exhibit 8

Current and Future Levels of Payroll/HR Integration: Government Organizations

(Number of Agencies)

Current Integration	Future: High	Medium	Low/DK	Total
High	8	0	0	8
Medium	1	3	0	4
Low	2	1	2	5
Total	11	4	2	17

Note: For information only; not necessarily projectible due to small sample size.

Exhibit 9

Current and Future Sources of Payroll/HR Applications: Commercial Organizations

(Number of Companies)

	Future Source				
	Package		Custom Development		
Current Source	Unmodified	Customized	Vendor	In-house	Total
Package					
• Unmodified	4	1	1	0	6
• Customized	0	2	1	0	3
Custom Development	1	1	1	1	4
Total	5	4	3	1	13

Notes:
- Seven others plan no significant changes.
- For information only; not necessarily projectable due to small sample size

Exhibit 10

Current and Future Sources of Payroll/HR Applications: Government Organizations

(Number of Agencies)

Current Source	Future Source: Package		Future Source: Custom Development			
	Un-modified	Customized	Vendor	In-house	Don't Know	Total
Package						
• Unmodified	0	0	0	0	0	0
• Customized	0	0	0	0	0	0
Custom Development	2	3	2	4	1	12
Total	2	3	2	4	1	12

Note: For information only; not necessarily projectable due to small sample size

Exhibit 11

Impact of Client/Server Technology on Payroll/HR Applications: Commercial Organizations

(Number of Companies)

	Payroll	HR
Current Impact		
• High	6	2
• Low/"don't know"	14	18
Future Impact		
• High	12	10
• Low/"don't know"	8	10

Note: For information only; not necessarily projectible due to small sample size.

Exhibit 12

Impact of Client/Server Technology on Payroll/HR Applications: Government

(Number of Agencies)

	Payroll	HR
Current Impact		
• High	1	0
• Low/"don't know"	16	17
Future Impact		
• High	3	3
• Low/"don't know"	14	14

Note: For information only; not necessarily projectible due to small sample size.

Exhibit 13

Importance of Geographic Proximity to Payroll User: Commerical Organization

(Number of Companies)

	"User" = Point Where		
Importance	Payroll is Administered	Checks Are Received/Distributed	Total
High	3	5	8
Low	4	2	6
Total	7	7	14

Notes:
- "Don't knows" omitted.
- For information only; not necessarily projectable due to small sample size.

Exhibit 14

Importance of Geographic Proximity to Payroll User: Government Organizations

(Number of Agencies)

	"User" = Point Where		
Importance	Payroll is Administered	Checks Are Received/Distributed	Total
High	5	4	9
Low	4	0	4
Total	9	4	13

Notes:
- "Don't knows" omitted.
- For information only; not necessarily projectable due to small sample size.

Exhibit 15

New Applications Selection Process: Groups Involved (Commercial Organizations)

	Groups Involved		
Step	Users(s) + IS	Users	IS
Identifying need for change	Often	Often	
Recommending/ approving hardware, software, processing	Often		Sometimes
Vendor short list and selection	Often		Sometimes

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Exhibit 16

New Applications Selection Process: Groups Involved (Government Agencies)

Step	Groups Involved: Single Agency	Groups Involved: Multiple Agencies
Identifying need for change	Often	Often
Recommending/ approving hardware, software, processing (RFP Preparation)	Often	Sometimes